AMENDMENT TO THE CLAIMS:

1. (Previously Presented) A portable maritime scoring and simulation system, comprising:

at least three buoys placed in a body of water;

a global positioning satellite (GPS) receiver attached to each buoy to provide a GPS location of the buoys;

an radio frequency (RF) radio system attached to each buoy;

an acoustic analysis system attached to each buoy to capture an acoustic signature of ordnance impacting the water;

a microprocessor attached to each buoy, wherein the microprocessor monitors and controls the GPS receiver, the RF radio system, and the acoustic analysis system;

a system controller to control and monitor the microprocessor; and,

an RF radio repeater system linking the RF radio system with the system controller,

wherein when the acoustic signature is captured by the acoustic analysis system, the RF radio system transmits a time of capture and the GPS location of said each buoy to the system controller through the RF radio repeater system,

wherein when said at least three buoys transmit the acoustic signature, which is captured, the system controller computes a location of impact using a location process, and

wherein the location process comprises a calculated accumulated error computed from a calculated impact location entered into an equation for said acoustic analysis system of each said buoy where an output is a residual for said equation.

2. (Previously Presented) The system of claim 1, further comprising five buoys.

3. (Original) The system of claim 2, wherein the five buoys comprise locations in a substantially pentagonal shape.

4. (Previously Presented) The system of claim 1, wherein the location process comprises a derived non-linear equation for an unknown vertical position within a two dimensional plane, an unknown horizontal position within the two dimensional plane, and an unknown time of the impact and N-simultaneous equations solved for the unknowns.

5. (Previously Presented) The system of claim 1, wherein the location process employs a least squares method.

6. (Previously Presented) The system of claim 1, further comprising an automated capability for the system controller to determine the location of the buoys with respect to a ship for buoy recovery,

wherein the RF repeater system marks the position of the ship for range and bearing calculations to the buoys.

7. (Previously Presented) The system of claim 1, wherein the accumulated error comprises a calculation of accumulated error in determining an ordnance impact location in relation to each said acoustic signature, which is captured.

8. (Original) The system of claim 1, wherein the RF radio repeater system comprises a digital signal processor, an RF radio, a GPS receiver, and a microphone.

9. (Currently Amended) A method of controlling the portable maritime scoring and simulation system, comprising:

commanding the buoys to report acoustic signature captures

selecting a fire mission type;

entering fire mission data;

waiting for messages from the buoys regarding acoustic signature captures;

calculating through a system controller and an acoustic analysis system an impact location from the acoustic signature captures using a location process;

updating the fire mission data with the impact location;

determining ~~if~~ a requirement of the fire mission type ~~requires~~ for further impacts and~~, if further impacts are required,~~ returning the system ~~returns~~ to a ready state, ~~if further impacts are not required~~ otherwise~~,~~ ending the fire mission ~~is ended~~; and,

recovering the buoys when system use is completed.

wherein the location process comprises a calculated accumulated error computed from a calculated impact location using real time data entered into an equation for said acoustic analysis system of each said buoy where an output is a residual for said equation.

10. (Previously Presented) The method of claim 9, further comprising selecting live or simulation communication with the buoys before arming the buoys.

11. (Previously Presented) The method of claim 9, further comprising loading and displaying a combat chart on a system controller display; and, entering buoy identification numbers for each buoy to facilitate radio communication between the buoys and the system controller.

12. (Previously Presented) The method of claim 9, further comprising displaying buoy positions on a combat chart to graphically depict buoy locations.

13. (Previously Presented) The method of claim 9, wherein calculating the impact location includes messages received from at least three buoys indicating an impact; linear approximation equations are derived for two-dimensional location and time variables for each buoy, which sends a message; and, the linear approximation equations are solved.

14. (Previously Presented) The method of claim 9, wherein said messages are received from more than three buoys.

15. (Previously Presented) The method of claim 13, wherein the linear approximation equations are solved by a least squares method.

16. (Previously Presented) The method of claim 9, wherein said equation comprises a linear approximation equation, said accumulated error is calculated using each of the linear approximation equation.

17. (Previously Presented) The method of claim 9, wherein the recovering the buoys includes the system controller calculates a distance and position of each buoy from a ship.